



March 10, 1999

**486.0103.006**

United States Environmental Protection Agency  
MS SFD-7-3  
75 Hawthorne Street, 9<sup>th</sup> Floor  
San Francisco, California 94105

Attention Mr. Dick Vesperman

**TRANSMITTAL  
REVISED DRAFT OPERATIONS AND MAINTENANCE PLAN  
UPLAND CAPPING SYSTEM  
FORMER UNITED HECKATHORN FACILITY  
RICHMOND, CALIFORNIA**

Dear Mr. Vesperman:

Enclosed please find the Revised Draft Operations and Maintenance [O&M] Plan, dated March 10, 1999. PES Environmental, Inc. has prepared this revised O&M Plan on behalf of Levin Richmond Terminal Corporation (LRTC), in response to verbal comments provided by the U.S. Environmental Protection Agency (EPA) on the draft O&M Plan dated February 26, 1998.

The as-built drawings referenced in this revised draft report have not yet been prepared. As you are aware, LRTC is nearing completion of the improved drainage system in the area south of the Former United Heckathorn facility, as well as several other minor improvements agreed upon with EPA. Upon completion of these tasks, the field portion of the upland capping project will be virtually finished and as-built drawings will be prepared showing all components of the cap and drainage system. The final O&M plan will include these as-built drawings and respond to EPA comments on this revised draft O&M Plan, as appropriate.

We trust that this is the information that you require at this time. If you have any questions or require additional information, please call.

Mr. Dick Vesperman  
March 10, 1999  
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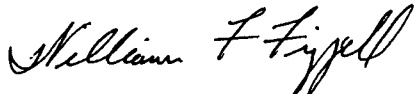
PES Environmental, Inc.

Yours very truly,

**PES ENVIRONMENTAL, INC.**

A handwritten signature in cursive script, reading "William W. Mast".

William W. Mast, R.G.  
Associate Engineer

A handwritten signature in cursive script, reading "William F. Frizzell".

William F. Frizzell, P.E.  
Principal Engineer

Attachments: Revised Draft Operations and Maintenance Plan

cc: Mike McCoy - LRTC  
Gary Levin - LRTC  
Keith Howard, Esq. - Cooper, White & Cooper



A Report Prepared for:

Levin Richmond Terminal Corporation  
402 Wright Avenue  
Richmond, California 94804

**REVISED DRAFT  
OPERATIONS AND MAINTENANCE PLAN  
UPLAND CAPPING SYSTEM  
FORMER UNITED HECKATHORN SITE  
RICHMOND, CALIFORNIA**

**MARCH 9, 1999**

By:

**D R A F T**

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William W. Mast, R.G.  
Associate Engineer

**D R A F T**

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William F. Frizzell, P.E.  
Principal Engineer

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### DISTRIBUTION

## **1.0 INTRODUCTION**

This Operations and Maintenance Plan (O&M Plan) has been prepared to document procedures for the long term management of the upland capping system at the 4.5-acre former United Heckathorn NPL site at the Levin Richmond Terminal Corporation (LRTC) facility in Richmond, California. The LRTC site is currently, and will continue to be, used for the storage and handling of bulk products such as furnace coke, cotton seed, and aggregates. The O&M Plan is a requirement under the Consent Decree issued for the United Heckathorn NPL Site and has been prepared as part of the pre-final/final design submittal for the upland cap.

The O&M Plan includes: (1) a description of the elements of the cap and drainage system; (2) inspection procedures to evaluate the integrity of the system; (3) corrective measures, if necessary, to repair and/or restore the cap and drainage system to maintain the integrity of the final remedy; and (4) cap performance monitoring.

## **2.0 DESCRIPTION OF CAPPING SYSTEM**

The cap across the upland area consists of reinforced concrete over most of the area and, in some areas, a gravel cover underlain with a geotextile membrane. Improved stormwater drainage consists of a surface sloped to drain to drop inlets. Subsurface piping from the drop inlets directs drainage to sedimentation interceptors prior to discharge to the Lauritzen Channel. The capping system has been designed to encapsulate pesticide-containing soils from potential environmental exposure or migration.

### **2.1 Concrete Cap**

The reinforced concrete cap consists of a minimum 6-inch thick concrete with steel wire reinforcement overlying a prepared and compacted subgrade. In some areas, the concrete overlies asphalt pavement. The reinforcing steel in the concrete consists of a double layer of 6-inch by 6-inch W4.5XW4.5 steel welded wire fabric (WWF) over the asphalt pavement and a double layer of 4-inch by 4-inch W4.5XW4.5 WWF over portions of the site that were not previously paved. It is anticipated that periodic future maintenance will be required to maintain the integrity of the slab.

### **2.2 Geotextile Fabric and Gravel Cover**

Limited portions of the upland cap in which bulk material handling and storage will not occur will be capped with a geotextile fabric and gravel. These areas are shown on AN West as-built Drawing Numbers C1 and C2. The gravel-covered areas contain a geotextile fabric placed on a prepared subgrade of soils potentially containing residual pesticides. The membrane is covered with a minimum of 6 inches of imported clean gravel.

### **2.3 Drainage System**

The surface of the site is sloped to direct surface water runoff to drainage swales and drop inlets. Subsurface piping directs runoff to the interceptors and subsequent discharge to Lauritzen Canal. The interceptors are designed to allow for a 5-minute retention time for a 24-hour, 10-year design storm event. The locations of the drop inlets, piping, interceptors, and discharge locations are shown on AN West as-built Drawings C1 and C2. This system will be incorporated into LRTC's facility-wide Storm Water Pollution Prevention Plan (SWPPP) and Storm Water Monitoring Plan (SWMP) as required for compliance with the State Water Resources Board, Industrial Activities-Storm Water General Permit [State General Permit]). Monitoring of discharge from the storm drain system is addressed in Section 6.0 below.

## **3.0 INSPECTION MONITORING PROGRAM**

### **3.1 Inspection of Concrete Cap**

The concrete cap will be inspected on a regular basis by LRTC personnel. Because of the continuous operations on the site, the exposed portions of the cap will likely be observed on a daily basis and any areas exhibiting deterioration will be visually obvious. A formal site inspection will be performed by LRTC on an annual basis and documented in a written report to the U.S. EPA and the CalEPA Department of Toxic Substances Control (DTSC).

Areas of the concrete cap that show evidence of significant deterioration and a potential for exposure of the underlying subgrade will be repaired in a timely manner and not longer than two weeks after deterioration is observed. If there is any evidence of a material breach of the cap and the subgrade is exposed, repair of the cap will be performed within one week. Such areas will be cordoned off to prevent traffic access and further disturbance until the repairs are complete. In the event that any breach of the cover is observed during the rainy season, the cap will be repaired within 24 hours.

### **3.2 Inspection of Gravel Cover**

The areas of gravel cover will be visually inspected on a regular basis as discussed above for the concrete cover. Also, a formal annual inspection will be performed by LRTC and documented in a written report that will be submitted to the U.S. EPA and DTSC.

Areas of the gravel cover that show signs of deterioration and a potential for exposure of the underlying geotextile fabric will be repaired in a timely manner and not longer than two weeks after signs of substantive deterioration are observed. If there is any evidence of a material breach of gravel and the fabric is exposed, repair of the cap will be performed within one week. Such areas will be cordoned off to prevent traffic access and further disturbance until

the repairs are made. In the event that any breach of the cover is observed during the rainy season, the cap will be repaired within 24 hours.

### **3.3 Inspection of Drainage System**

The stormwater drop inlets and interceptors will be inspected in September of every year, prior to the rainy season, and monthly through April to observe sediment levels. During periods of significant rainfall, more frequent inspections may be necessary. When the sediment has accumulated to a depth of approximately 18 inches in the interceptors, the sediment will be removed using excavation equipment or hand labor, as appropriate. Management of materials removed from the drop inlets and interceptors shall follow the procedures described below in Section 4.4.

## **4.0 CORRECTIVE MEASURES**

### **4.1 Repair of Concrete Cap**

All areas requiring repair shall be prepared by sawcutting into surrounding competent concrete. Repairs of the concrete will include doweling or similar structural connection of the repaired section with the adjacent slab areas. The new section of concrete shall be installed in accordance with the approved plans and specifications. Any repair work will be documented in the Annual Report as described in Section 7.0.

### **4.2 Repair of Gravel Cover**

In the event that the gravel cover and membrane require repair, the area needing repair will be rebuilt to the specifications included approved plans and specifications. Any repair work will be documented in the Annual Report as described in Section 7.0.

### **4.3 Repair of Drainage System**

In the event that portions of the drainage system require repair, such repairs will be made in accordance with the approved plans and specifications. If any breaches in the cap occur around the manholes or drop inlets, the cap will be repaired by sealing with an appropriate lean concrete or gravel depending upon the surrounding surface cover. Repairs of the concrete will include saw cutting into surrounding competent concrete and doweling or similar structural connection of the repaired section with the adjacent slab areas. Any repairs will be documented in the Annual Report as described in Section 7.0.

#### **4.4 Cleanout of Storm Water Interceptors and Drop Inlets**

Sediment from the interceptors will be removed in accordance with the following procedures:

- Remove the interceptor covers and baffles;
- Remove the clarified water above the accumulated sediment using a pump and filtering system. A sump pump fitted with a sock-type in line filter can be used. The intake hose shall be positioned above the sediment and clarified water discharged to the downstream outlet of the interceptor;
- Once the clarified water has been removed, the saturated sediment shall be removed using a backhoe or other suitable equipment and placed in a bin for off-site disposal. Equipment used for removing the sediments from the interceptor should be fitted with a smooth edge to avoid damaging the interior surfaces and hardware of the interceptors; and
- If there is any evidence to suggest that contaminated sediments have entered the interceptor (such as surface water monitoring results or breaches in the cap), then the sediments will be sampled and analyzed for characterization prior to proper off-site disposal.

Sediment accumulated in the drop inlets will be removed using hand labor. Any sediment removed from the drop inlets will be combined with sediment removed from the interceptors and managed appropriately, as discussed above.

#### **5.0 PROCEDURES FOR MAINTENANCE AND REPAIR ACTIVITIES**

This section describes procedures to be followed during maintenance and repair activities within the United Heckathorn facility boundary that involve breaching the cap and exposing subsurface soils that potentially contain residual pesticide concentrations. Such activities may include, but are not limited to, trenching for utilities, repair to subsurface piping and/or drainage systems, new structural installations, removal and repair of railroad tracks and ties, or other activities that may potentially expose subsurface soils.

These procedures should also be followed for applicable activities during the final stages of cap construction. This includes those activities during the winter and spring of 1999 when the cap is nearing completion but there remains minor construction to complete drainage system construction and rail repair activities, prior to EPA formal approval of the upland capping program.



### **5.1 Excavation into Underlying Soil**

Any excavation into soil underlying the concrete cap or gravel cap should be conducted in a manner to avoid dispersion of dusts or soil particles to the worker breathing zone or to the surrounding surface. If there is a planned significant disturbance of the underlying soils (greater than 20 cubic yards of soil), a licensed hazardous waste contractor or hazardous material trained personnel should be utilized to perform such work using worker health and safety and air monitoring procedures, as appropriate.

### **5.2 Management of Excavated Soil**

All excavated soil shall be placed on visqueen or other plastic sheeting. The soil shall be properly covered and secured with plastic sheeting to avoid dispersal via wind or rainfall until final disposition of the soil is determined. Management options will include off-site disposal or replacement into the excavation, as appropriate. For any material planned for off-site disposal, the material will be sampled and profiled for waste classification purposes. For soil that is determined to be hazardous waste, appropriate handling, manifesting, transporting, and record keeping procedures will be followed.

### **5.3 Surface Water Management**

Disturbance of the cap and potential exposure of subsurface soils should be avoided during wet weather conditions. In the event of rainfall during maintenance or repair activities, the exposed area shall be securely covered with plastic sheeting to minimize the potential for exposure to rainwater. Under no circumstance shall any potentially contaminated material (e.g., soil or runoff) be discharged to the storm drain system or to the environment. As a contingency measure, in the event that surface water contacts contaminated soil, the following measures shall be implemented:

- Collect impacted water in a temporary storage container;
- Sample and analyze the water for chlorinated pesticides using U.S. EPA Test Method 8080;
- Discharge the water to the storm drain system only if the analytical results confirm no detectable concentrations of pesticides; and
- In the event that the analytical results reveal detectable concentrations of pesticides, alternative disposal methods such as discharge to the City of Richmond Sanitary Sewer or transportation to an off-site disposal facility shall be evaluated.

## **6.0 STORMWATER MONITORING PROGRAM**

As indicated in Section 2.3, the facility operates under the State General Permit for industrial stormwater discharge. The stormwater management program will be expanded to incorporate activities to verify the performance of the capping system. This section discusses: (1) the objectives of the stormwater monitoring program as it relates to monitoring of the cap; and (2) the stormwater monitoring schedule and analytical program.

### **6.1 Stormwater Monitoring Objectives**

The objective of the stormwater monitoring program is to verify the cap is effectively preventing release of soils potentially containing residual concentrations of to the Lauritzen Channel.

### **6.2 Monitoring Locations, Sampling Procedures and Analytical Program**

The monitoring program will consist of sampling and analysis of stormwater runoff from the collection/discharge system. As discussed above, drainage from the upland cap is collected by surface swales, drop inlets and subsurface piping that direct runoff into five storm water interceptors prior to discharge to the Lauritzen Canal. To evaluate whether sediments potentially containing residual pesticides are being transported in stormwater runoff, water samples will be collected at the outlet of each interceptor. The locations of the interceptors are presented on AN West Drawings C1 and C2.

Because drainage from the cap area occurs only during storm events, sample collection will be performed in conjunction with the requirements of the State General Permit. These requirements specify that: (1) runoff samples will be collected from two significant storms events during the wet season; (2) the samples will be collected from a storm event that produces significant runoff and is preceded by at least three days of dry weather; and (3) the samples will be collected during or within 2 hours of normal working hours (7:00 AM - 4:00 PM).

Samples will be collected using a clean stainless steel or plastic bailer or dipper. If a reusable sampler is used, it will be cleaned with deionized water and a nonphosphate detergent between sample locations. The storm drain sampling port at the outlet at each interception will be removed and the bailer/dipper will be immersed and filled, and samples decanted directly into two 1-liter, glass amber bottles.

To ensure internal QA/QC of sampling procedures, a duplicate sample will be collected randomly from one of the five sampling locations. The samples will be labeled with the following information: (1) project name; (2) project reference number; (3) sample collection date and time; and (4) sample identification code. The sample identification code will be comprised of the letter "I" to reference interceptor, followed by a numerical digit to reference which interceptor the sample was collected from.

Samples will be stored in a chilled, thermally insulated cooler and delivered to the laboratory under chain-of-custody protocol by the technician who collected the samples or by the laboratory's courier service. Sampling information and observations of stormwater runoff will be recorded on a sample collection log. A copy of the chain-of-custody form, sample label and sample collection log form are provided in the Appendix.

Runoff samples will be analyzed for pesticides using EPA Test Method 8080. Additional analyses performed under the facility SWMP include: selected heavy metals; suspended sediments; pH; total petroleum hydrocarbons quantified as gasoline, motor oil, and diesel; oil and grease; specific conductance; and chemical oxygen demand. Analysis of the samples and duplicate will be performed by a state-certified laboratory which participates in an EPA quality assurance/quality control (QA/QC) program. The QA/QC program will include: (1) method blank samples; (2) method spike samples; (3) method spike duplicates; (4) surrogate standard recovery; and (5) laboratory control sample recovery.

## **7.0 REPORTING**

The results of inspections, monitoring, and maintenance to the proposed cap and drainage system will be documented in an Annual Report. If concentrations of pesticides are detected during sampling events, their presence will be evaluated and recommendations proposed for identifying the source of the release and implementing corrective actions, as appropriate. Copies of the laboratory reports and chain-of-custody forms will also be provided. The Annual Report will be submitted to the U.S. EPA and DTSC on or before July 1 of each year. This date coincides with the reporting date for the State's General Permit

Additionally, in the event of evidence of pesticide release from the former United Heckathorn facility, the U.S. EPA will be notified within 24 hours.

## ILLUSTRATIONS

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**APPENDIX**

**SAMPLING FORMS**



1682 NOVATO BOULEVARD, SUITE 100  
NOVATO, CALIFORNIA 94947  
(415) 899-1600 FAX (415) 899-1601

PROJECT MANAGER: \_\_\_\_\_

[illegible][illegible][illegible]

NOTE		CHAIN OF CUSTODY RECORD						
		RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)		DATE	TIME	
		RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)		DATE	TIME	
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		RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)		DATE	TIME	
		RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)		DATE	TIME	
		DISPATCHED BY: (Signature)		DATE	TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
		METHOD OF SHIPMENT:						



**PES Environmental, Inc.**  
Engineering & Environmental Services

1682 Novato Blvd.  
Suite 100  
Novato, CA 94947

(415) 899-1600  
FAX (415) 899-1601

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PROJECT NAME \_\_\_\_\_  
PROJECT # \_\_\_\_\_  
DATE \_\_\_\_\_ TIME \_\_\_\_\_  
SAMPLE # \_\_\_\_\_  
ANALYSIS \_\_\_\_\_  
NOTE/PRES. \_\_\_\_\_

**DISTRIBUTION**

**REVISED DRAFT  
OPERATIONS AND MAINTENANCE PLAN  
UPLAND CAPPING SYSTEM  
FORMER UNITED HECKATHORN SITE  
RICHMOND, CALIFORNIA**

**MARCH 9, 1999**

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